

## **WHAT IS CLAIMED IS:**

1. A system for distilling liquor and devices for the system, the system and the devices comprising:

a bottom layer having

a heating unit with a base comprising a heating chamber with a bottom and an inner wall made of thermal-conductive and anti-corrosive material, a heater accommodated inside the heating chamber, an impurity depositing area defined in the bottom of the heating chamber, an impurity outlet communicating with the impurity depositing area inside the heating chamber, a water inlet communicating with the heating chamber to conduct water into the heating chamber, an waste water outlet communicating with the heating chamber above the impurity depositing area, and a steam pipe attached to the heating chamber, wherein the heater is connected to the base of the heating unit and adapted to receive thermal energy from an outside heating device to heat the water inside the heating chamber to generate heating steam;

a middle layer having

a cracking unit mounted over the heating unit to generate liquor steam and comprising a dividing plate made of thermal-conductive and anti-corrosive material and attached to a bottom of the middle layer, a dissociating reducing device secured over the dividing plate, an impurity depositing area on the dividing plate, a waste water outlet communicating to the impurity depositing area, a steam chamber surrounding the dividing plate and the dissociating reducing device, and an inlet with a water-level monitoring panel attached to the steam chamber to introduce alcoholic paste into the steam chamber, wherein the alcoholic paste is piled on the

1        dividing plate and heated by the heating steam to generate the liquor steam;

2            a top layer having

3                a purifying distilling unit communicated with the cracking unit to distill

4                the liquor from the middle layer and comprising a distilling tower with multiple

5                distilling layers, multiple ventilating holes defined in each of the multiple distilling

6                layers, and a liquor steam chamber constructed below the distilling tower; and

7                an outer cooling assembly connected to the top layer and having

8                a cooling unit comprising a condensing chamber, a gas pipe connected

9                between the distilling tower and the condensing chamber, at least one cooling device

10          received inside the condensing chamber, an alcohol detecting device mounted on the gas

11          pipe, a helically awaking layer connected below to the condensing chamber;

12          wherein, the bottom layer, the middle layer, and the top layer are separable;

13          wherein, the cracking unit and the purifying distilling unit communicate with

14          each other to achieve a cyclically purifying process so that liquor steam is repeatedly

15          cracked, purified and reformed by cracking processes in the dissociating device and by

16          repeatedly purifying processes in the distilling tower to generate liquor having excellent

17          quality.

18          2. The system and the devices as claimed in claim 1, wherein the heater in the

19          heating unit comprises multiple stainless steel tubes evenly arranged in a circle and a

20          cone-shaped cap mounted on the multiple stainless steel tubes.

21          3. The system and the devices as claimed in claim 1, wherein at least one gas

22          outlet respectively attached to the heater in the heating unit.

23          4. The system and the devices as claimed in claim 1, wherein the water inlet in

24          the heating unit connects to a water supplying device.

1       5 The system and the devices as claimed in claim 1, wherein the water inlet in  
2 the heating unit connects to a detergent supplier to input detergent to clean the system.

3       6. The system and the devices as claimed in claim 5, wherein the detergent is  
4 nontoxic citric acid.

5       7. The system and the devices as claimed in claim 1, wherein the water inlet in  
6 the heating unit is controlled by an automatically controlling system to control quantity  
7 of the water and to automatically supply the water.

8       8. The system and the devices as claimed in claim 1, wherein the dividing plate  
9 is shaped into a disk with an annular concave.

10       9. The system and the devices as claimed in claim 1, wherein the dividing plate  
11 has the multiple steam holes defined through the dividing plate.

12       10. The system and the devices as claimed in claim 1, wherein the dissociating  
13 reducing device in the cracking unit is flushed by the liquor steam to vibrate to crack  
14 alcohol molecules in the liquor steam.

15       11. The system and the devices as claimed in claim 1, wherein the dissociating  
16 reducing device in the cracking unit is made of stainless steel.

17       12. The system and the devices as claimed in claim 1, wherein the dissociating  
18 reducing device in the cracking unit is round-shaped.

19       13. The system and the devices as claimed in claim 1, wherein the dissociating  
20 reducing device in the cracking unit is made for a boiler.

21       14. The system and the devices as claimed in claim 1, wherein the dissociating  
22 reducing device in the cracking unit is constructed in a singular layer.

23       15. The system and the devices as claimed in claim 1, wherein the dissociating  
24 reducing device in the cracking unit has multiple manifold pipes.

1        16. The system and the devices as claimed in claim 1, wherein the dissociating  
2        reducing device in the cracking unit is clamped by a top plate and a bottom plate, both  
3        the top plate and the bottom plate are made of stainless steel.

4        17. The system and the devices as claimed in claim 16, wherein multiple round  
5        holes are respectively defined on the bottom plate and the top plate.

6        18. The system and the devices as claimed in claim 1, wherein each of the  
7        multiple distilling layers in the distilling tower is made of stainless steel.

8        19. The system and the devices as claimed in claim 1, wherein each of the  
9        multiple distilling layers in the distilling tower is dome-shaped.

10        20. The system and the devices as claimed in claim 1, wherein the condensing  
11        chamber in the cooling unit has at least one condensing device accommodated inside the  
12        condensing chamber.

13        21. The system and the devices as claimed in claim 20, wherein a cold water  
14        chamber surrounds the at least one cooling device.

15        22. The system and the devices as claimed in claim 21, wherein the cold water  
16        chamber has a top and a water inlet attaches to the cold water chamber near the top.

17        23. The system and the devices as claimed in claim 26, wherein the cold water  
18        chamber has a bottom and a water outlet attaches to the cold water chamber near the  
19        bottom.

20        24. The system and the devices as claimed in claim 1, wherein the top layer and  
21        the middle layer are hermetically engaged by means of engaging rings.

22        25. The system and the devices as claimed in claim 26, wherein the bottom layer  
23        and the middle layer are hermetically by clamping the dividing plate therebetween.

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